	Missouri Department of Natural Resources Administrative Policies and Procedures	
Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**	**Revised**
Number: 8.04	**April 11, 2005**	**September 8, 2006**

The Missouri Department of Natural Resources has adopted the data elements, types, definitions, and code sets described and referenced in this document. These standards must be used for operational data management systems developed or enhanced after March 23, 2005, which is the date the standards were first approved by the Department's Deputy Directors. Optionally the standards can be applied to other systems and data.

REFERENCES

This document is based on information from the Facility Identification and Latitude/Longitude standards approved by the Exchange Network Leadership Council (ENCL)and the Environmental Protection Agency (EPA), and from existing standards defined within the Missouri Adaptive Enterprise Architecture. Additional and enhanced data element definitions and code sets were then developed by the Missouri Department of Natural Resources.

GENERAL PROVISIONS

This document lists the name of each data element followed by the data type and length restrictions for that element. Each element is also accompanied by a description and, when applicable, hyperlinks to code sets that list the acceptable values for a given data element.

Many data elements use both coded values and text descriptions. While coded values allow for more efficient processing and storage of data, text descriptions require less explanation. In each case, only one of the related pair of data elements is required for any given system. These sets of related data elements and instructions regarding their use appear in *red italic text* throughout this document.

All of the hyperlinks to code sets in this document point to tables on our department's Intranet site. The use of these code sets is mandatory. Please contact department Geographic Information Systems (GIS) Coordinator or your Division's Information Technology liaison if you have questions or recommendations regarding this document and the items referenced within it.

LOCATIONAL DATA ELEMENTS, TYPES, DEFINITIONS, AND CODE SETS

Location Address (PADDRESS) A(50)
The address that describes the physical (geographic) location of the front door or main entrance of a facility site, including urban-style street address or rural address.

	Missouri Department of Natural Resources Administrative Policies and Procedures

Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	Effective date	Revised
Number: 8.04	April 11, 2005	September 8, 2006

Supplemental Location Text (PSUPADDRES) A(50)

The text that provides additional information about a place, including a building name with its secondary unit and number, an industrial park name, an installation name or descriptive text where no formal address is available.

If the data in the address data elements defined above must be accurate enough to be used for geocoding purposes, system designers should consider using the more detailed address data standards defined by Missouri's Adaptive Enterprise Architecture (MAEA). Search the MAEA Web site for the most current version of the standard.

NOTE: All systems that include Locality information must include the Locality GNIS Code and optionally may include the Locality Name.

Locality GNIS Code (PLOCALGNIS) A(6)

The official code for the locality using the Geographic Names Information System (GNIS) database.

Allowable Values: Modified to remove duplicates. See **Missouri CODE SET**

Locality Name (PLOCALNAME) A(60)

The name of the city, town, village or other locality, when identifiable. This is not always the same as the city used for United States Postal Service mail delivery.

Allowable Values: (examples) "None" is an allowable value. Modified from FIPS 55 Guideline: Codes for Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas. See **Missouri CODE SET**

NOTE: All systems that include County information must include the County FIPS Code and optionally may include the County GNIS Code and the County Name.

County FIPS Code (COUNTYFIPS) A(3)

The last three digits of the five-digit FIPS code that represents the county or county equivalent and the state or state equivalent of the United States.

Allowable Values: All codes for counties and county equivalents of all states of the U.S. as well as U.S. territories and possessions found in FIPS publication 6-4, Counties and Equivalent Entities of the United States, Its Possessions, and Associated Areas. See **Missouri CODE SET** OR **United States CODE SET**

County GNIS Code (COUNTYGNIS) A(6)

The official code for the county using the Geographic Names Information System (GNIS) database.

Allowable Values: See **Missouri CODE SET** OR **United States CODE SET**

County Name (COUNTYNAME) A(35)

The name of the U.S. county or county equivalent.

	Missouri Department of Natural Resources Administrative Policies and Procedures		
Chapter 8 Data Processing			
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**		**Revised**
Number: 8.04	**April 11, 2005**		**September 8, 2006**

Allowable Values: From EPA's Environmental Data Registry. See **Missouri CODE SET** OR **United States CODE SET**

NOTE: All systems that include State Codes <u>must</u> include the State FIPS Code and <u>optionally</u> may include the State GNIS Code.

State FIPS Code (PSTATEFIPS) A(2)
Two digit codes for representing the 50 states.
Allowable Values: Modified from FIPS publication 5-2. See **CODE SET**

State GNIS Code (PSTATEGNIS) A(7)
The official code for the state using the Geographic Names Information System (GNIS) database.
Allowable Values: See **CODE SET**

NOTE: All systems that include State Abbreviation or State Name <u>must</u> include the State Abbreviation and <u>optionally</u> may include the State Name.

State Abbreviation (PSTATEABBR) A(2)
Two-letter abbreviation for the name of a principal administrative subdivision of the United States.
Allowable Values: Modified from FIPS publication 5-2. See **CODE SET**

State Name (PSTATENAME) A(35)
The name of a principal administrative subdivision of the United States.
Allowable Values: Modified from EPA's Environmental Data Registry. See **CODE SET**

Country Name (PCNTRYNAME) A(44)
The name that represents a primary geopolitical unit of the world.
Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

Zip Code (PZIPCODE) A(5)
Five digit Zone Improvement Plan (ZIP) code assigned by the U.S. Postal Service to a geographic location; or the postal zone specific to the country other than the United States.

Zip Extension (PZIPCODE4) A(4)
Four digit extension code (if available) that represents the geographic segment that is a subunit of the ZIP Code, assigned by the U.S. Postal Service to a geographic location; or the postal zone specific to the country, other than the United States.

Tribal Land Name (TRIBLDNAME) A(200)
The name of an American Indian or Alaskan native area.
 Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

Missouri Department of Natural Resources Administrative Policies and Procedures		
Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**	**Revised**
Number: 8.04	**April 11, 2005**	**September 8, 2006**

NOTE: All systems that include horizontal coordinate data for feature locations <u>must</u> include the following four data elements (UTM Easting, UTM Northing, UTM Zone, and Horizontal Reference Datum Name) and <u>optionally</u> may include other coordinate, zone, and datum data elements.

UTM Easting (UTMEASTING) N(9.3)
Easting coordinate based on the Universal Transverse Mercator (UTM) grid system.
<u>Allowable Values</u>: Values should not include trailing zeroes unless the method used to derive the location warrants the accuracy indicated by the use of trailing zeroes.

UTM Northing (UTMNORTHNG) N(10.3)
Northing coordinate based on the Universal Transverse Mercator grid system.
<u>Allowable Values</u>: Values should not include trailing zeroes unless the method used to derive the location warrants the accuracy indicated by the use of trailing zeroes.

UTM Zone (UTMZONE) N(2)
Six-degree north zone number from the Universal Transverse Mercator grid system.
<u>Allowable Values</u>: Integers between 1 and 60. For locations in Missouri, this should always be 15. Coordinates for Missouri features that fall in UTM Zone 16 North <u>must</u> be projected to UTM Zone 15 North in order to provide a common spatial reference for all features located in the State. Also note that there is no zone direction indicator since all features in the United States are referenced to a north UTM zone as they are all located north of the equator.

NOTE: All systems that include coordinate data for feature locations <u>must</u> include the Horizontal Reference Datum Name and <u>optionally</u> may include the Horizontal Reference Datum Code.

Horizontal Reference Datum Name (HDATUMNAME) A(7)
The name that describes the reference datum used in determining coordinates.
<u>Allowable Values</u>: From EPA's <u>Environmental Data Registry</u>. See **CODE SET**

Horizontal Reference Datum Code (HDATUMCODE) A(3)
The code that represents the reference datum used in determining coordinates.
<u>Allowable Values</u>: From EPA's <u>Environmental Data Registry</u>. See **CODE SET**

NOTE: All systems that include latitude and longitude coordinate data for feature locations <u>must</u> be reference those coordinate data to the same Horizontal Reference Datum as the UTM coordinates in that system.

Latitude Measure (LATITUDE) N(8.6)
The measure of the angular distance on a meridian north or south of the equator.

	Missouri Department of Natural Resources Administrative Policies and Procedures

Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**	**Revised**
Number: 8.04	**April 11, 2005**	**September 8, 2006**

Allowable Values: Values should not include trailing zeroes unless the method used to derive the location warrants the accuracy indicated by the use of trailing zeroes.

Longitude Measure (LONGITUDE) N(9.6)
The measure of the angular distance on a meridian east or west of the prime meridian.
Allowable Values: Values should not include trailing zeroes unless the method used to derive the location warrants the accuracy indicated by the use of trailing zeroes.

NOTE: All systems that include United States National Grid data for feature locations <u>must</u> be reference those data to the same Horizontal Reference Datum as the UTM coordinates in that system.

United States National Grid Zone Designator (USNGZONE) A(3)
The National Grid coordinate field Grid Zone designation.

United States National Grid Regional Area (USNGREGION) A(2)
The National Grid coordinate field Regional Area designation.

United States National Grid Coordinate (USNGCOORD) A(16)
The National Grid coordinate field designation to precision of 1 meter.
Allowable Values: Values should not include trailing zeroes unless the method used to derive the location warrants the accuracy indicated by the use of trailing zeroes.

Horizontal Accuracy Estimate (HACCURACY) N(6)
The estimated accuracy (in meters) of the coordinates.

Estimated Position Error (EPE) N(3)
An estimate of the position error (in meters) of coordinates collected by some global positioning system (GPS) receivers based upon a variety of factors including dilution of precision (DOP) and satellite signal quality. This element is intended to record Estimated Position Error (EPE) or Figure of Merit (FOM) readings from GPS receivers that provide this information.

Point Dilution Of Precision (PDOP) N(2)
An indicator of the predicted error in a GPS position as determined by satellite geometry. This element is intended to record Point Dilution of Precision (PDOP) readings from GPS receivers that provide this information.

NOTE: All systems that include data for geometric type <u>must</u> include the Geometric Type Name and <u>optionally may include the</u> Geometric Type Code.

	Missouri Department of Natural Resources Administrative Policies and Procedures		
Chapter 8 Data Processing			
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**		**Revised**
Number: 8.04	**April 11, 2005**		**September 8, 2006**

Geometric Type Name (GEOTYPNAME) A(6)
The name that identifies the geometric entity represented by one point or a sequence of points.
Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

Geometric Type Code (GEOTYPCODE) A(3)
The code that represents the geometric entity represented by one point or a sequence of points.
Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

NOTE: All systems that include data for horizontal collection method must include the Horizontal Collection Method Code and optionally may include the Horizontal Collection Method Text.

Horizontal Collection Method Code (HCOLLCODE) A(3)
The code that represents the method used to determine the coordinates for a point on the earth.
Allowable Values: Modified from EPA's Environmental Data Registry. See **CODE SET**

Horizontal Collection Method Text (HCOLLTEXT) A(60)
The text that describes the method used to determine the coordinates for a point on the earth.
Allowable Values: Modified from EPA's Environmental Data Registry. See **CODE SET**

Source Map Scale Number (SOURCESCAL) N(10)
The number that represents the proportional distance on the ground for one unit of measure on the map or photo. Remarks: Mandatory for all horizontal data collection methods that employ some method of interpolation from a map or remotely sensed image.

NOTE: All systems that include data for Reference Point must include the Reference Point Code and optionally may include the Reference Point Text.

Reference Point Code (REFPTCODE) A(3)
The code that represents the place for which coordinates were established.
Allowable Values: Modified from EPA's LRT return file format. See **CODE SET**

Reference Point Text (REFPTTEXT) A(60)
The text that identifies the place for which coordinates were established.
Allowable Values: Modified from EPA's LRT return file format. See **CODE SET**

NOTE: All systems that include data for coordinate data source must include the Coordinate Data Source Code and optionally may include the Coordinate Data Source Name.

Coordinate Data Source Code (SOURCECODE) A(3)
The code that represents the party responsible for providing the locational coordinates.

	Missouri Department of Natural Resources Administrative Policies and Procedures

Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**	**Revised**
Number: 8.04	**April 11, 2005**	**September 8, 2006**

Allowable Values: Modified from EPA's LRT return file format. See **CODE SET**

Coordinate Data Source Name (SOURCENAME) A(35)
The name of the party responsible for providing the locational coordinates.
Allowable Values: Modified from EPA's LRT return file format. See **CODE SET**

Data Collection Date (DATECOLL) DATE
The calendar date when data were collected.

Location Comments Text (COMMENTS) A(254)
The text that provides additional information about the locational coordinates.

NOTE: All systems that include vertical data for feature locations <u>must</u> include the Vertical Collection Method and <u>optionally</u> may include the Vertical Collection Method Text.

Vertical Collection Method Code (VCOLLCODE) A(3)
The code that represents the method used to collect the vertical measure (i.e., the altitude) of a reference point.
Allowable Values: Modified from EPA's From EPA's Environmental Data Registry. See **CODE SET**

Vertical Collection Method Text (VCOLLTEXT) A(60)
The text that describes the method used to collect the vertical measure (i.e., the altitude) of a reference point.
Allowable Values: Modified from EPA's From EPA's Environmental Data Registry. See **CODE SET**

NOTE: All systems that include vertical data for feature locations <u>must</u> include the Vertical Reference Datum Name and <u>optionally</u> may include the Vertical Reference Datum Code.

Vertical Reference Datum Text (VDATUMNAME) A(17)
The name of the reference datum used to determine the vertical measure (i.e., the altitude).
Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

Vertical Reference Datum Code (VDATUMCODE) A(3)
The code that represents the reference datum used to determine the vertical measure (i.e., the altitude).
Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

Vertical Measure (VMEASURE) N(10)
The measure of elevation (i.e. the altitude), in meters, above or below a reference datum.

Vertical Accuracy Estimate (VACCURACY) N(8)
The estimated accuracy (in meters) of the vertical measure (i.e., the altitude) of a reference point.

	Missouri Department of Natural Resources Administrative Policies and Procedures

Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**	**Revised**
Number: 8.04	**April 11, 2005**	**September 8, 2006**

NOTE: All systems that include Verification Method data must include the Verification Method Code and <u>optionally</u> may include the Verification Method Name.

Verification Method Code (VERIFCODE) A(3)
The code that represents the process used to verify the latitude and longitude coordinates.
<u>Allowable Values</u>: From EPA's Environmental Data Registry. See **CODE SET**

Verification Method Text (VERIFTEXT) A(50)
The text that describes the process used to verify the latitude and longitude coordinates.
<u>Allowable Values</u>: From EPA's Environmental Data Registry. See **CODE SET**

Mailing Address (MADDRESS) A(50)
The exact address where a mail piece is intended to be delivered, including urban-style street address, rural route, and PO Box.

Mailing Address Supplemental Text (MSUPADDRES) A(50)
The text that provides additional information to facilitate the delivery of a mail piece, including building name, secondary units, and mail stop or local box numbers not serviced by the U.S. Postal Service.

Mailing Address Locality Name (MLOCALE) A(60)
The name of the city, town, or village where the mail is delivered.
<u>Allowable Values</u>: (examples) "None" is an allowable value. The code set found in the current FIPS 55 Guideline: Codes for Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas. The URL is http://www.itl.nist.gov/div897/pubs/fip55-3.htm. See **Missouri CODE SET**

NOTE: All systems that include mailing address data <u>must</u> include the Mailing Address State Abbreviation and <u>optionally</u> may include the Mailing Address State Name.

Mailing Address State Abbreviation (MSTATEABBR) A(2)
Two-letter abbreviation for the name of a principal administrative subdivision of the United States where mail is delivered.
<u>Allowable Values</u>: From FIPS pub 5-2. See **CODE SET**

Mailing Address State Name (MSTATENAME) A(35)
The name of the state where mail is delivered.
<u>Allowable Values</u>: From EPA's Environmental Data Registry. See **CODE SET**

Mailing Address Country Name (MCNTRYNAME) A(44)
The name of the country where the addressee is located. Default: United States.

	Missouri Department of Natural Resources Administrative Policies and Procedures	
Chapter 8 Data Processing		
Locational Data Elements, Types, Definitions, and Code Sets	**Effective date**	**Revised**
Number: 8.04	**April 11, 2005**	**September 8, 2006**

Allowable Values: From EPA's Environmental Data Registry. See **CODE SET**

Mailing Address Zip Code (MZIPCODE) A(5)
Five digit Zone Improvement Plan (ZIP) code assigned by the U.S. Postal Service to a geographic location; or the postal zone specific to the country, other than the U.S., where mail is delivered.

Mailing Address Zip Extension (MZIPCODE4) A(4)
Four digit extension code (if available) that represents the geographic segment that is a subunit of the ZIP Code, assigned by the U.S. Postal Service to a geographic location; or the postal zone specific to the country, other than the U.S., where mail is delivered.